in the name of George II., but the Japanese claim it by right of prior discovery and occupation. It is principally frequented by whalers, for supplies. There are no notable features in the sea-bed between this island and the coast of Japan.

COGGIA'S COMET

THE latest observations taken here give the following position of this comet, which, compared with that of June, published in NATURE, vol. x. p. 113, shows the present direction of the motion.

June 14, at 10h. 42m. 30s. mean time at Twickenham.

R.A.	7h. 7m. 24·56s.
D.	+ 68° 56′ 31″·5

The comet on this evening was distinctly visible to the naked eye, sensibly brighter than 43 Camelopardi, and therefore rather higher than the fifth magnitude. Towards midnight it was possible to detect a difference between its appearance, without the telescope, and that of neighbouring stars.

There appears a decided similarity between the elements of this comet and those of the second comet of 1737 observed by the French Missionaries in China. For the latter body I have calculated the following orbit, from the observations, or rather the estimated places, published by the Baron de Zach (Mon. Corresp. xxi. p. 318).

Perihelion passage 1737, June 2·230 Greenwich M.T.

	°	′
Longitude of perihelion	261	58
Ascending node	132	5
Inclination of orbit	61	52
Perihelion distance	0·8348	

Motion—Direct.

Daussy's elements of this comet which appear in our catalogues are certainly defective.

The present comet was detected when the true anomaly before perihelion exceeded 100°, and there is every probability that Mr. Stone at the Cape of Good Hope may be able to furnish a good normal place at a large arc of anomaly after perihelion. Hence the period of the comet may be determined directly from the observations. In another week's time we shall doubtless know very nearly the course which it will take when near the earth and sun in the first half of July; but so far, the determination of the elements has been one of no ordinary difficulty, as I find the continental computers have remarked as well as myself.

J. R. HIND

Mr. Bishop's Observatory, Twickenham,
June 16

NOTES

WE need not say much on Monday night's debate as to the appointment of a minister of Education; as we have already often referred to the subject our ideas must be known. Mr. Lyon Playfair's appeal was certainly strong, unanswerable we think, but it referred too much to education and too little to science. Our scientific administration ought to be as strong as that of our law, and we are confident that it ultimately will be. Sir John Lubbock's speech was admirable. He said it was surely a great mistake to suppose that the business of an Education Minister would be confined to questions relating to elementary schools. We must, he thought, take a broader view of the question. "We had," he said, "large educational endowments, but a system which was not even now in harmony with the present state of things, and which consequently does not produce the results which might reasonably be expected. If there had been a Minister of Education the Endowed Schools would not have been allowed to fall into the condition in which too many of them were when the Endowed Schools Act was passed." Speaking of the Fellowships of Oxford and Cambridge, numbering 720, he said, "Out of the whole number he believed that not above a dozen had been given for proficiency in Natural Science, while even as regarded the Scholarships those offered for Natural Science are only a small fraction of the whole. But then the Colleges said, and said with some force, that they could not do more for Natural Science because the subject was not sufficiently taught in the schools; while, on the other hand, the schools did not teach it because so few inducements were held out at the Universities. Both admitted that a change was needed, but each was waiting for the other. Here, again, the influence of some co-ordinating authority was much needed. Then there was the management of our museums. It was generally felt that the erection of the new Natural History Museum at South Kensington should be taken advantage of to effect a change in the governing authority of the British Museum; that, as recommended by the Science Commission, the national collections should be under the charge of directors, responsible to a special Minister of State. At present the different national collections were in competition, not in harmony." The arguments urged in favour of the appointment of an Education Minister were simply eluded by its opponents, though it is at least consoling to think that Mr. Disraeli's speech was carefully guarded; indeed the opinion of many is that in time he will see his way to supporting the appointment of such a Minister.

IN reply to a question in the House of Commons on Monday Lord Sandon stated that arrangements had been made for bringing the various departments at the South Kensington Museum more directly under the control of the Education Department at Whitehall.

LORD RAYLEIGH, F.R.S., a member of the Council of the Mathematical Society, is about to do a very handsome thing, which will make that Society greatly indebted to him, and which should earn the gratitude of all mathematicians and therefore of all scientific workers. He has expressed his intention of presenting 1,000*l.* to the Mathematical Society to assist it in the publication of its Proceedings and in the purchase of mathematical periodicals. The application of this handsome gift shows great discrimination on the part of the donor.

THE Professorship of Zoology and Comparative Anatomy at King's College, London, is rendered vacant by the resignation of Mr. T. Rymer Jones, F.R.S., who has held it since the year 1836.

WE regret having to record the death on June 6 of Dr. Hermann Vogelsang, Professor in the Polytechnicum of Delft, at the early age of 36. He was well known for his various publications on subjects connected with the microscopical structure of rocks and minerals.

AT the meeting of the French Academy on June 8, the death was announced of M. Roulin, librarian to the Academy, and editor of the first volumes of the *Comptes Rendus.*

THE deputation of the Royal Geographical Society which waited on Government in reference to the family of the late Dr. Livingstone recommended that 10,000*l.* or 11,000*l.* should be granted; but it seems the Government have thought 3,000*l.* sufficient, with about 1,000*l.* by way of payment of arrears due to the followers and servants of the doctor. This is in addition to the 200*l.* pension, which is to be continued to the family. The Geographical Society seems to be quite satisfied with this arrangement.

IT seems to be generally allowed that this year's Cambridge commencement has been unusually brilliant; the number of honorary degrees conferred on Tuesday was very large. The names of the scientific men to whom the degree of LL.D. was given we have already mentioned. At the same time the thanks of the

University were conveyed to the Chancellor, the Duke of Devonshire, for his handsome gift of the Cavendish Laboratory. At the Oxford Encænia yesterday, the degree of D.C.L. was conferred, among others, upon Victor Carus, Professor of Comparative Anatomy and Zoology in the University of Leipsig.

We congratulate the University of Cambridge that its Board of Natural Science Studies have at last come to see that the Oxford system in the Natural Sciences Tripos is the only workable one, and the only one which can lead to really valuable results and the discouragement of cramming and superficiality. The Board having had under consideration the reports of the examiners for the Natural Sciences Tripos for several successive years, which express more or less dissatisfaction with the present system on account of the inducements it offers to the candidates to spread their reading over a wide area rather than to study deeply a limited section of natural sciences, think that the objects of the examination—viz. to offer sufficient stimulus to exertion, and at the same time to give encouragement to sound study—will be best secured by dividing the first class into two divisions, and by arranging the names in each of these divisions and in each of the other two classes in alphabetical order. They think it desirable that the first class should consist of those who, having shown adequate general knowledge in the first three days of the examination, have shown superior proficiency in some one, at least, of the branches of natural science included in the examination, and that in the case of every student placed in the first class, the subject or subjects for knowledge whereof he is placed in the first class be signified in the published list. They are also of opinion that it is desirable that those who pass the first three days' examination with credit should be entitled to admission to the B.A. degree. To carry out these recommendations the Board propose certain alterations in the rules of the Tripos defining more strictly the parts to be included in the first three days' examination, and add regulations to carry out their new scheme.

As the statute for settling the future stipend of the Professsor of Geology at Oxford has now passed Convocation the Vice-Chancellor will proceed to an election in the course of the present month. Any gentlemen who have not already sent in their names are requested to do so on or before Saturday, June 20.

There are several points in connection with the Annual Commemoration of the University of Sydney, held on March 28 last, which are worthy of notice, and which must be pleasing to the friends of scientific education. The number of students attending lectures at the University during the past Session was 48, being the largest number at one time since the establishment of the University. The number of "superior graduates" now in the University is 87; on this reaching 100 it will be entitled to send a representative to the Legislative Assembly. In recognition of the zeal and efficiency with which Mr. Liversidge has performed his duties as Reader in Geology and Mineralogy, the Senate have promoted him to the higher grade and position of Professor in those sciences, and Demonstrator in Practical Chemistry, and have also voted 500*l.* for the improvement of his laboratories.

Further the Senate of Sydney University have made what many of our readers will regard as a wise law; viz. that candidates, who at the second yearly examination should have displayed a marked proficiency in any one of the three schools of classics, mathematics, or natural science, should be allowed, on the recommendation of the examiners, to devote themselves in their third year exclusively to the subjects of that school, and to be examined for B.A. in them only.

At the same commemoration, a very gratifying act of munificence was announced. Mr. William Macleay, M.L.A., F.L.S., has expressed his intention of bequeathing to the University his valuable library and collection of natural history, upon trust for the promotion of that science, and the instruction of the students and the inhabitants of the colony in the same. He also expresses his intention of leaving to the University the sum of 6,000*l.*, the interest upon which is to be applied to the payment of the salary of a properly-qualified curator, to be specially and exclusively employed in the care and preservation of the specimens belonging to the collection, or any additions that may be made to it. The library already consists of about 2,000 volumes, and Mr. Macleay states that he is continually adding to it all the most valuable of the periodicals and proceedings of Societies of Natural History, published in England, France, Germany, Belgium, and Russia. It includes a large number of books on Natural History, which belonged to the late Mr. William Sharpe Macleay, F.L.S., and which have been presented by his brother, Mr. George Macleay, C.M.G., F.L.S., to accompany the collection. The collection of specimens, we believe, may be considered one of the most extensive and valuable in the world. It was first formed by the late Alexander Macleay, F.R.S., F.L.S., and was considered about fifty years ago the first collection in Europe. Many additions were made to it by his son, the late Mr. W. S. Macleay, who, as well as his father, was considered one of the most eminent entomologists of his day. During the last fifteen years the collection has been greatly enriched by the present owner, Mr. William Macleay, by the accumulation of large numbers of Australian insects, besides a considerable collection from other parts of the world. The library and collection are to be maintained and known by the name of the "Macleayan Natural History Collection," and to be open to the inspection of the students of the University and the general public, at all such proper and convenient times as may be appointed for that purpose. From the admirable spirit which seems to animate the University of Sydney, we should think this munificent gift is likely to be fruitful of the best results.

On June 10 W. H. Miller, F.R.S., Professor of Mineralogy in the University of Cambridge, was elected a Fellow of St. John's College, Cambridge. Prof. Miller took his degree at the college and was formerly for several years a Fellow. He has now been elected for the second time under the statute empowering the college to elect as Fellow "any person eminent for Science or learning." At the same time the Very Rev. C. Meridale, Dean of Ely, Prof. J. C. Adams, and T. Todhunter were elected Honorary Fellows. C. T. Clough, and J. N. Langley have been elected Scholars for proficiency in Natural Science, and A. M. Marshall (Scholar 1873) has received an exhibition in augmentation of his scholarship. First class in the college examination in Natural Science (alphabetical order):—Clough, Langley, Marshall, and Stewart.

We are glad to see from the Fourth Annual Report of the Devon and Exeter Albert Memorial Museum, Schools of Science and Art, and Free Library, that all departments of the institution are in a flourishing and satisfactory condition. It is gratifying to see that the Science schools are gaining ground, and we hope the Committee will do all in its power to develop these and induce those for whose benefit they are intended to take advantage of them. The museum has been greatly improved during the past year by the addition of cases, the arrangement of specimens, and the acquisition of a number of skeletons of typical vertebrates.

We are pleased to see from the Sixteenth Report of the East Kent Natural History Society that it is in a satisfactory condition as regards members, funds, and work; the number of members at the end of 1873 was 97; several valuable and appropriate books have been added to the library and a new microscope purchased. Several important papers have been read bearing on local and general natural history.

The Committee of the Leeds Mechanics' Institute and Schools of Art and Science have resolved to accede to a generally expressed wish that they should organise a Yorkshire Exhibition of Arts and Manufactures, to be opened in Leeds on May 1, 1875. The object of the Exhibition will be to promote the Fine Arts and Art and Science as applied to Manufactures, and the surplus funds will be applied to the liquidation of the debt now remaining on the Leeds Mechanics' Institute.

A very successful meeting, under the presidency of the Mayor of Bristol, was held at the Victoria Rooms, Clifton, for the purpose of inaugurating the formation of a College of Science and Literature for the south and west of England and South Wales, to which we referred in Nature, vol. x. p. 93. The meeting was perfectly harmonious, and we have no doubt that the scheme so auspiciously begun will be successfully accomplished. It is evidently intended that science will hold an equally important place with literature in the new college.

Winge and Heiberg, of Christiania ("Die puerperalen und pyaemischen processe," H. Heiberg, Leipzig, 1873), point out the remarkable presence of a fungus, which is at least very like a vibrio, in the basis of the sore in cases of pyæmic ulcerative endocarditis (*Mycosis endocardii* Winge), and Heiberg shows in similar cases the crowding of such beings in the superficial lymphatics of some of the viscera. This appears to be an important contribution to the views of Lister as to the septic character of the pyæmic diseases.

A piece of native gold weighing 200 kilogrammes, and worth 24,000*l.*, has been found in French Guyana, and sent to Paris to be placed in the Colonial Exhibition at the Champs Elysées.

The French Academy of Sciences has held a long secret committee meeting on the propriety of granting to M. Chapelas-Coulvier-Gravier a sum of money for his meteoric observatory on the upper part of the Luxembourg Palace. A very strong opposition was offered, and it is doubtful whether the grant will be allowed.

Upwards of a year ago there was founded at Berlin in connection with the German Geographical Society, a "German Society for the Exploration of Equatorial Africa," or, shortly, the "African Society," having for its president the well-known Dr. Bastian, and vice-president Dr. Neumayer. The Society has received handsome subscriptions to enable it to carry out its object, including a large sum from the Government. An expedition under Dr. Paul Güssfeldt was soon organised, and in the end of May left Liverpool for the west coast of Africa, in the steamer *Nigretia*, which unfortunately was wrecked off Sierra Leone on June 14, Dr. Güssfeldt losing nearly all the equipments of the expedition. He got another ship to take him to Cabinda in Congo, the seat of the German African Trading Company, where he found Dr. Bastian, who had also gone out to organise the work of the expedition. From Cabinda as a starting-point, several journeys have already been made into the interior, and in the *Correspondenzblatt* of the Society, several numbers of which have been issued, an account of the work done is given in a number of letters from Dr. Bastian, Dr. Güssfeldt, and others.

We are glad to see that the governors of the Burnley Grammar School in the reconstruction of the buildings have given considerable facilities for the practical teaching of Science. They have provided, among other rooms, two well-contrived laboratories, one of which is to be devoted to chemical manipulation, and the other to experimental physics. The school is expected to open on August 1, and the governors have elected as headmaster Mr. Joseph Hough, B.A. (Cambridge), now Science Master at the Rossall School. It is likewise the intention of the governors to found a central science school, which shall be open in the evening for the instruction of persons occupied in the day-time in commercial pursuits. This school is intended to carry out the recommendation of the Commission on Scientific Instruction in one of their recent reports.

Mr. George Smith has returned from his second Assyrian expedition. He brings home a very large collection of new cuneiform tablets and fragments, as well as a great many interesting objects of Assyrian art, including the entire lintel in sculptured stone of one of the ancient palace gateways.

The forthcoming number of Petermann's *Geographische Mittheilungen* will contain an important contribution by Prof. Hanns Höfer, the geologist of Count Wilczek's expedition of 1872, on the geography of Spitzbergen. The paper contains the results of careful observation on the harbours, the configuration of the island, especially in the neighbourhood of Horn Sound, and on the glaciers, which were minutely explored.

A novelty in legislation consists in the recent introduction into the U.S. Congress of a bill proposing to grant the State of Minnesota 200,000 acres of land within its limits, the proceeds of which shall be kept as a perpetual fund, the interest to be applied to the support, maintenance, and equipment of an astronomical observatory and school of mines at St. Anthony's Falls in connection with the Minnesota State University. A special stipulation in this proposed act is that the schools shall be free of charge to all students.

We have received the first two numbers of the *Quarterly Journal of Conchology*, conducted by Messrs. W. Nelson and J. W. Taylor (Hardwicke). We should think it likely to prove of considerable value to the class to which it is addressed.

We have received the Report of the Ashmolean Society for the year 1873. During last year the Society has held Seven General Meetings, at which a number of valuable scientific papers were read by well-known men of science.

Messrs. Maclachlan and Stewart, of Edinburgh, have ready for immediate publication a work entitled the "Birds of Shetland," with observations on their habits, migration, and occasional occurrence, by the late Dr. Saxby. It will be published at one guinea.

The various learned bodies of Massachusetts, especially the American Academy of Arts and Sciences, and the Boston Society of Natural History, are urging upon the Legislature the importance of undertaking a new and thorough scientific survey of the commonwealth. The results expected from such a survey at the present time are a detailed topographical map on a scale of an inch to the mile, maps coloured to show the distribution of rock-formations and economic minerals, with charts on a larger scale of particular localities having special interest or importance; also full descriptions of everything connected with the theoretical and economical mineralogy and geology of the State, and especially full descriptions and truthful illustrations of the animals and plants, including their natural history, transformations, and relations to man and his requirements.

The additions to the Zoological Society's Gardens during the past week include a Vulturine Guinea Fowl (*Numida vulturina*) from East Africa, presented by Dr. J. Kirk; a Stump-tailed Lizard (*Trachydosaurus rugosus*) from Australia, presented by Mr. N. Clements; a Spotted Cavy (*Cœlogenys paca*) from South America, presented by Mr. J. W. Alexander; a Crested Agouti (*Dasyprocta cristata*) from Colon, presented by Mrs. Wood; a Persian Gazelle (*Gazella subgutturosa*) and a Fennec Fox (*Canis fennec*) from Persia, presented by Mr. E. S. Dawes; two Cormorants (*Phalacrocorax carbo*), British, presented by Capt. Salvin; five Mandarin Ducks (*Aïx galericulata*) hatched in the Gardens.